U.S. Patent and Trademark Office. U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. Attorney Docket No. UTILITY Robert Sigura PATENT APPLICATION First Inventor TRANSMITTAL Title (Only for new nonprovisional applications under 37 CFR 1.53(b)) Express Mail Label No. Commissioner for Patents Mail Stop Patent Application APPLICATION ELEMENTS ADDRESS TO: P.O. Box 1450 See MPEP chapter 600 concerning utility patent application contents. Alexandria VA 22313-1450 CD-ROM or CD-R in duplicate, large table or Fee Transmittal Form (e.g., PTO/SB/17) 1. **X** Computer Program (Appendix) (Submit an original and a duplicate for fee processing) Nucleotide and/or Amino Acid Sequence Submission 2. Applicant claims small entity status. (if ap<u>plicable, all necessary)</u> See 37 CFR 1.27. Computer Reader Form (CRF) з. 🔀 Specification Total Pages (preferred arrangement set forth below) Specification Sequence Listing on: - Descriptive title of the invention Cross Reference to Related Applications - Statement Regarding Fed sponsored R & D CD-ROM or CD-R (2 copies); or - Reference to sequence listing, a table, or a computer program listing appendix Paper Background of the Invention - Brief Summary of the Invention Statements verifying identity of above copies - Brief Description of the Drawings (if filed) **ACCOMPANYING APPLICATION PARTS** Detailed Description - Claim(s)
- Abstract of the Disclosure Assignment Papers (cover sheet & document(s)) 37 CFR 3.73(b) Statement Power of 4. Trawing(s) (35 U.S.C. 113) [Total Sheets 10. 🔲 (when there is an assignee) Attorney English Translation Document (if applicable) [Total Sheets 5. Oath or Declaration Copies of IDS a. Newly executed (original or copy) Information Disclosure Statement (IDS)/PTO-1499 Citations Copy from a prior application (37 CFR 1.63(d)) **Preliminary Amendment** (for continuation/divisional with Box 18 completed) Return Receipt Postcard (MPEP 503) (Should be specifically itemized) <u>DELETION OF INVENTOR(S)</u> Signed statement attached deleting inventor(s) Certified Copy of Priority Document(s) (if foreign priority is claimed) name in the prior application, see 37 CFR Nonpublication Request under 35 U.S.C. 122 16. 🗀 1.63(d)(2) and 1.33(b). (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent. Application Data Sheet. See 37 CFR 1.76 17. Other: 18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76: of prior application No.: 10/462, 191 Continuation-in-part (CIP) Continuation Divisional Prior application information:

Examiner Otilia Cahor Art Unit: 2878

For CONTINUATION OF DIVISIONAL APPS only; The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts. 19. CORRESPONDENCE ADDRESS OR Correspondence address below Customer Number or Bar Code Label (Insert Customer No. or Attach bar code label here) Name Street Address Zip Code State City Fax Telephone Country Registration No. (Attorney/Agent) Name (Print/Type) Signature

This collection of information is required by 37 CFR \$53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450, DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND T: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

3049

PTO/SB/17 (01-03)

Approved for use through 04/30/2003. OMB 0651-0032

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FEE TRANSMITTAL for FY 2003

Effective 01/01/2003. Patent fees are subject to annual revision.

Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT

Name (Print/Type)

Signature

(\$) 375.00

Complete if Known				
Application Number				
Filing Date				
First Named Inventor	Robert Sigurd Nelson			
Examiner Name	,			
Art Unit				
Attorney Docket No.				

METHOD OF PAYMENT (check all that apply)	FEE CALCULATION (continued)				
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	Large Entity S				
Deposit Account:		iee Fee Fee Description code (\$) Fee	Paid_		
Deposit Account		2051 65 Surcharge - late filing fee or oath			
Number Deposit		2052 25 Surcharge - late provisional filing fee or			
Account Name		cover sheet			
The Commissioner is authorized to: (check all that apply)		1053 130 Non-English specification 1812 2,520 For filing a request for ex parte reexamination			
Charge fee(s) indicated below Credit any overpayments	· ·	1804 920* Requesting publication of SIR prior to			
Charge any additional fee(s) during the pendency of this application		Examiner action			
Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.	1805 1,840* 1	1805 1,840° Requesting publication of SIR after Examiner action			
	1251 110	2251 55 Extension for reply within first month	- 1		
FEE CALCULATION	1252 410	2252 205 Extension for reply within second month	——		
1. BASIC FILING FEE Large Entity Small Entity	1253 930	2253 465 Extension for reply within third month	——		
Fee Fee Fee Fee Fee Description Fee Paid	1254 1,450	2254 725 Extension for reply within fourth month	-		
Code (\$) Code (\$) 1001 750 2001 375 Utility filing fee 2775 M	1255 1,970	2255 985 Extension for reply within fifth month	 		
1001 750 2001 375 Utilify filing fee 375.00 1002 330 2002 165 Design filing fee	1401 320	2401 160 Notice of Appeal			
1003 520 2003 260 Plant filing fee		2402 160 Filing a brief in support of an appeal	—		
1004 750 2004 375 Reissue filing fee		2403 140 Request for oral hearing			
1005 160 2005 80 Provisional filing fee		1451 1,510 Petition to institute a public use proceeding			
SUBTOTAL (1) (\$) 375.00		2452 55 Petition to revive - unavoidable			
2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE		2453 650 Petition to revive - unintentional	\dashv		
Fee from		2501 650 Utility issue fee (or reissue) 2502 235 Design issue fee			
Extra Claims below Fee Paid Total Claims 20 -20** = 0 X = 0	1502 470 1503 630	2502 235 Design issue fee 2503 315 Plant issue fee			
Independent 2 3** = 0 x	1503 630 1460 130	1460 130 Petitions to the Commissioner			
Claims -3 -	1807 50	1807 50 Processing fee under 37 CFR 1.17(q)			
Large Entity Small Entity	1807 50	1806 180 Submission of Information Disclosure Stmt			
Fee Fee Fee Fee Fee Description Code (\$) Code (\$)	8021 40	Recording each patent assignment per			
1202 18 2202 9 Claims in excess of 20		property (times number or properties)	——		
1201 84 2201 42 Independent claims in excess of 3	1809 750	2809 375 Filing a submission after final rejection (37 CFR 1.129(a))			
1203 280 2203 140 Multiple dependent claim, if not paid	1810 750	2810 375 For each additional invention to be examined (37 CFR 1.129(b))			
1204 84 2204 42 ** Reissue independent claims over original patent	1801 750	examined (37 CFR 1.129(b)) 2801 375 Request for Continued Examination (RCE)			
1205 18 2205 9 ** Reissue claims in excess of 20 and over original patent	1802 900	1802 900 Request for expedited examination of a design application			
10. 205 OA	Other fee (spe	• ''			
SUBTOTAL (2) (\$)3/5.00		Basic Filing Fee Paid SUBTOTAL (3) (\$) 0.0	0		
Or number previously paid, if greater, 1-0 recesses					
SUBMITTED BY		(Complete (ii applicable)			

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NELSON

Registration No.

Telephone

Date

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

. Submitted: August 25, 2003) . For: DEVICE AND SYSTEM FOR ENHANCED SPECT, PET,	NEL	SON, Robert S. et al.)
	Subr	nitted: August 25, 2003))
AND COMPTON SCATTER () IMAGING IN NUCLEAR () MEDICINE ()	For:	ENHANCED SPECT, PET, AND COMPTON SCATTER IMAGING IN NUCLEAR	,)))))

Mail Stop Patent Applications Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sirs,

Please find enclosed a 69 page document titled "Device and System for Enhanced SPECT, PET, and Compton Scatter Imaging in Nuclear Medicine". Included are 29 pages of Figures. This is a continuation-in-part to the application titled "Device and System for Improved Compton Scatter Imaging in Nuclear Medicine" which was filed on 06/16/2003 (APPL NO. 10/462,191) and is a continuation-in-part to the patent "Device and System for Improved Imaging in Nuclear Medicine and Mammography" (US Patent Number 6,583,420 issued 06/24/2003, Examiner: Otilia Gabor, Group Art Unit: 2878). There are a total of 20 Claims.

Supplemental material includes Disclosure documents: 464163, 464164, 482333, 513200 and references: 1. A. Castoldi, et al., "Spectroscopic-Grade X-ray Imaging up to 100-kHz Frame Rate With Controlled-Drift Detectors", IEEE Transactions on Nuclear Science, Vol. 48, No. 4, August 2001, pp. 982-986.

- 2. J. Baciak, Z. He, "Comparison of 5 and 10 mm thick Hgl2 pixelated gamma-ray spectrometers", Nuclear Instruments and Methods in Physics Research A 505 (2003) 191-194.
- 3. A. Beyerle, et al., "Parallel pulse processing for mecuric iodide gamma-ray detectors", Nuclear Instruments and Methods in Physics Research A 242 (1986) 443-449.
- 4. E. Wulf, et al., "Depth Measurement in a Germanium Strip Detector", IEEE Transactions on Nuclear Science, Vol. 49, No. 4, August 2002, pp. 1876-1880.
- 5. E. Kalemci, et al., "Model calculations of the response of CZT strip detectors", SPIE Vol. 3768, July 1999, pp. 360-373.
- 6. J. Huber, et al. "Calibration of a PET Detector Module that Measures Depth of Interaction", IEEE Transactions on Nuclear Science, Vol. 45, No. 3, June 1998, pp. 1268-1272.

The appropriate forms are provided:

- 1. Utility Patent Application Transmittal Form.
- 2. Fee Transmittal Form (Small Entity Status).
- 3. Declaration-Utility or Design Patent Application.
- 4. Credit Card Payment Form.

If there are any questions I can be contacted by email (rnelson@mail.sdsu.edu) or by phone (619-594-1013).

Robert Sigurd Nelson

August 25, 2003

Date V

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